Acronyms and Abbreviations

A

AFSPC	Air Force Space Command

C

CCDS	Charge Coupled Device System
CFR	Code of Federal Regulations
COPUOS	United Nations Committee on the Peaceful Uses of Outer Space

D

DOD	Department of Defense
DOC	Department of Commerce
DOE	Department of Energy
DOT	Department of Transportation

E

ELV	Expendable Launch Vehicle
ESA	European Space Agency
Eureca	European Retrievable Carrier
EVA	Extravehicular Activity

F

FCC	Federal Communications Commission

G

GEO	Geosynchronous Earth Orbit
GEODSS	Ground Electro-Optical Deep Space System
GLONASS	Global Navigation Satellite System
GPS	U.S. Global Positioning System
GTO	Geosynchronous Transfer Orbit

I

IADC	Inter-Agency Space Debris Coordination Committee

L

LDEF	Long Duration Exposure Facility
LEO	Low Earth Orbit

M

MEO	Medium Earth Orbit
MIT/LL ETS	Massachusetts Institute of Technology Lincoln Laboratory Experimental Test System

N

NASA	National Aeronautics and Space Administration
NASDA	National Space Development Agency of Japan
NOAA	National Oceanic and Atmospheric Administration

P

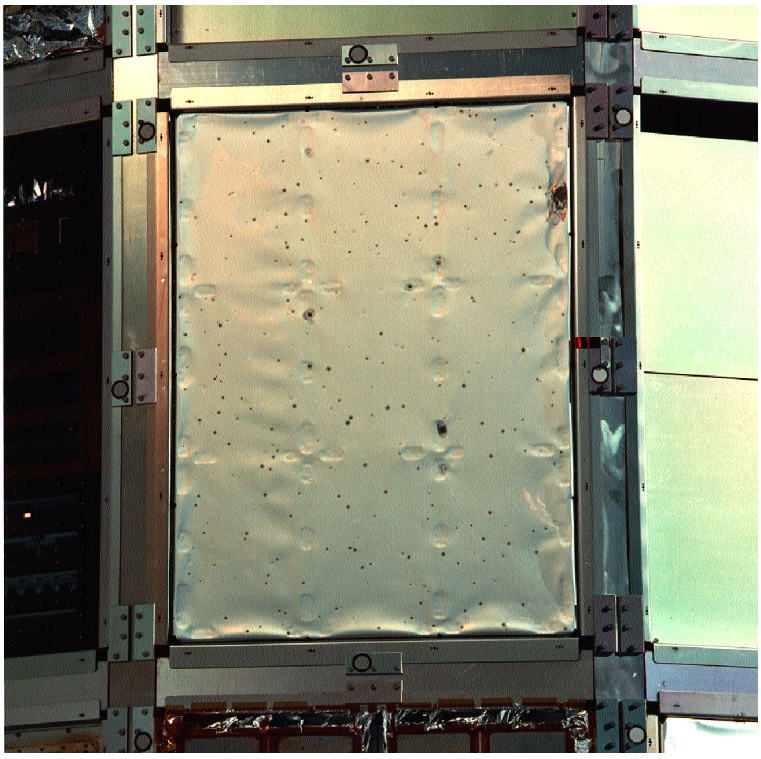
PL/AMOS	Phillips Laboratory Air Force Maui Optical Station

S

SOCIT	Satellite Orbital Debris Characterization Impact Test
SPADOC 4	Space Defense Operations Center, block 4
SRM	Solid Rocket Motor
SSN	Space Surveillance Network
STSC	COPUOS Scientific and Technical Subcommittee

U

USSPACECOM	U.S. Space Command



The Long Duration Exposure Facility (LDEF) was deployed in orbit to measure the environment by exposing a number of different materials in a controlled manner so that the meteoroid and orbital debris too small to be measured remotely could be quantified and assessed. It was recovered after nearly six years in orbit and is a major source of data on the relative frequency of natural as opposed to man-made debris.

More than 32,000 impact craters visible to the unaided eye have been observed. The largest impact crater was 0.5 cm in diameter. Analysis indicates that approximately one-half of the larger craters were of orbital debris origin and one-half were meteoroids; nearly all of the smallest craters are due to orbital debris.

This one-square-meter panel of teflon thermal blanket contains a large number of hypervelocity-induced “pin holes,” each surrounded by a larger darkened area. The darkened area is believed to be caused by the shock of the impact and possible reaction of the material to ultraviolet radiation.